



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/AU99/01101 <b>(22) International Filing Date:</b> 13 December 1999 (13.12.99)  <b>(30) Priority Data:</b> PP 7696                      14 December 1998 (14.12.98)      AU PP 7697                      14 December 1998 (14.12.98)      AU PP 7702                      14 December 1998 (14.12.98)      AU PQ 1847                      27 July 1999 (27.07.99)              AU  <b>(71) Applicant (for all designated States except US):</b> FOOD & PACKAGING CENTRE MANAGEMENT LIMITED [AU/AU]; John Street, Hawthorn, VIC 3122 (AU).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> YU, Long [AU/AU]; Normanby Road, Clayton, VIC 3169 (AU). CHRISTIE, Gregor, Bruce, Yeo [AU/AU]; 52 McGregor Street, Middle Park, VIC 3026 (AU). COOMBS, Stephen [AU/AU]; University of Queensland, Brisbane, QLD 4072 (AU).  <b>(74) Agent:</b> MISCHLEWSKI, Darryl; P.O. Box 1254, Camberwell, VIC 3124 (AU).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> BIODEGRADABLE POLYMER  <b>(57) Abstract</b> <p>A biodegradable polymer is disclosed having the composition g) from 8 to 80 % by weight of a starch modified to include an hydroxyalkyl C<sub>2-6</sub> group or modified by reaction with an anhydride of a dicarboxylic acid, preferably hydroxypropylated high amylose starch, a) from 0 to 87.9 % of starch, b) from 4 to 11 % by weight of a water soluble polymer selected from polyvinylacetate, polyvinyl alcohol and copolymers of ethylene and vinylalcohol which have a melting point compatible with the molten state of the starch components, c) from 0 to 20 % by weight of a polyol plasticiser, preferably glycerol, d) from 0.1 to 1.5 % by weight of a C<sub>12-22</sub> fatty acid or salt, preferably stearic acid and, e) 0 to 12 % added water. The polymers are suitable as biodegradable rigid sheet or flexible film materials for use in packaging foodstuffs.</p>		